

NEW CHALK TALK



Concept/Mind Mapping: Initial Experience and Lessons Learned (Part 1)

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Last month, CLT hosted 2 consecutive workshops on concept mapping and mind mapping. With an encouraging faculty turnout we introduced concept mapping as a teaching tool for educators and a learning tool for students.

Having used concept mapping/mind mapping considerably during her years as a medical student, Dr Mostafa found it to be an invaluable tool that provided a global picture relating to any given topic. It also helped her identify connections that were not readily apparent in texts and outlines.

With her encouragement, we decided to take concept mapping on a “dry run” by incorporating it into the syllabus of two “Scientific Thinking” sections this semester. Our main motivation stemmed from the simple goal of wanting our students to read the assigned articles in-depth before coming to class, and to read them “critically”. We had previously tried other strategies like giving them bonus “reading quizzes” during the first five minutes of class. The results were mixed: the students loved the idea of a “bonus” and would technically read the assignment, but they quickly learned to “read for the quiz”. This resulted in a superficial understanding of the text which they tended to forget within a short period of time.

We decided to try something new by assigning a concept map for each reading. With the help of a free online software we thought we had something promising. At the very least, the students were going to learn a new skill, and hopefully come to class prepared for an interesting in-class discussion. It turned out to be much more rewarding. But before sharing our experience, a few words about concept mapping and mindmapping are in order.

FAQs about Concept Mapping and Mind Mapping

Concept maps were first used by J.D.Novak and his colleagues at Cornell (1960s) as a means of representing relationships between concepts. They are grounded in the learning theory known as “constructivism” which views the importance of prior knowledge as a framework to learn new knowledge. Based on this model, concept maps should help us identify how our students think. So...

What is Concept Mapping? Concept mapping is a way of graphically representing knowledge. Knowledge is dissected into clusters (concepts) or nodes of information which are embedded in boxes. A central concept is linked through a network of “nodes” to related concepts. Links can be made between the nodes with arrows and/or connecting phrases.

What is Mind Mapping? Introduced by Tony Buzan in the 1960’s, it is a graphical technique of taking notes or visualizing thoughts or ideas. Mind maps are highly visual with icons and colors as well as inserts in the form of images or other visual prompts. They are structured around one central concept, word or idea, with branches and sub-branches of related ideas.

What's the difference? Basically a mind map has one central concept while a concept map may have many. While they can both highlight links between concepts, mindmaps are highly visual.

How can I incorporate mapping into my classes? Once you try it out for yourself, the sky is the limit. You will be able to select what works best for you in your classroom environment. We have used a hybrid technique that integrates the visual effects of mindmaps into concept mapping. So far our students have had to prepare:

- Concept maps/mind maps for assigned readings
- Concept maps/mind maps on broad topics such as “Evolution”
- Concept maps/mind maps for lectures.

How do I prepare students for concept mapping? It's always a good idea to start out slow. Introduce the idea first. Assigning a short in-class activity where students practice using a hand -drawn map seems to work well. Another option would be to brainstorm as a class and work out a map together on the board where students can see it all fall into place “real-time”. Students should be advised to use a pencil and paper to plan out their maps regardless of whether or not they plan to use a mind mapping software. Most students, with time, will come to find this highly visual form of learning useful.

What about computer generated maps? Multiple software systems for mind mapping and concept mapping are available. This semester we used a free online mapping software; “mindomo.com”. Computer generated maps offer many advantages over paper and pencil including the option of altering maps easily, inserting images and hyperlinks, saving it as an image or PDF file in addition to a wide variety of other options.

(To be continued)

SOURCES:

For information about concept mapping and JD Novak's work see:

<http://cmap.ihmc.us/Publications/ResearchPapers/TheoryCmaps/TheoryUnderlyingConceptMaps.htm>

For information about Mind Mapping and Tony Buzan's work see:

<http://www.jcu.edu.au/studying/services/studyskills/mindmap/index.html>

<http://dmc.umn.edu/objects/mindmap/>

Visit this site for free online mapping software:

<http://www.mindomo.com>

Share with us your experiences by contributing to the New Chalk Talk series, or by simply sending comments/suggestions to allozy@aucegypt.edu, hodamostafa@aucegypt.edu